

## Claims

1. A metal jet apparatus comprising a discharge nozzle which melts metal and jets the molten metal, inert gas supply means for supplying inert gas to a peripheral portion of a discharge port of said discharge nozzle, and a nozzle cover having a space which is in communication with said discharge port of said discharge nozzle and an outlet of said inert gas supply means and which opens downward, wherein a projection is provided around the opening of said nozzle cover.

2. The metal jet apparatus according to claim 1, further comprising heating means for heating said discharge nozzle and said inert gas supply means.

3. A metal jet apparatus comprising a discharge nozzle which melts metal and jets the molten metal, and gas supply means for supplying inert gas to a peripheral portion of a discharge port of said discharge nozzle.

4. A metal jet apparatus comprising a discharge nozzle provided therein with molten metal, a discharge port for jetting said molten metal from one end of said discharge nozzle, and a pressing body for pressing said molten metal from the other end of said discharge nozzle in which said pressing body intermittently presses said molten metal in said discharge nozzle and jets said molten metal from said discharge port, wherein said discharge nozzle includes a curved surface shaped inner wall which forms a focal point at said discharge port or in the vicinity of said discharge port.

5. A metal jet apparatus comprising a discharge nozzle provided therein with molten metal, a discharge port for jetting said molten metal from one end of said discharge nozzle, and a pressing body for pressing said molten metal from the other end of said discharge nozzle in which said pressing body

intermittently presses said molten metal in said discharge nozzle and jets said molten metal from said discharge port, wherein said pressing body includes a curved surface shaped inner wall which forms a focal point at said discharge port or in the vicinity of said discharge port.

6. A metal jet method comprising the steps of: jetting molten metal from a discharge nozzle in a form of droplet, and supplying inert gas to a peripheral portion of a discharge port of said discharge nozzle.

7. A jet apparatus according to the metal jet apparatus in claim 4 or 5, wherein said molten metal is replaced by a mixture of liquid and metal powder or non-metal powder, or liquid.